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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/837,526	04/18/2001	Robert Uskali	PD05962AM	8197

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EXAMINER	
FISH, JAMIESON W	

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/837,526	USKALI ET AL.	
	Examiner	Art Unit	
	Jamieson W. Fish	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 April 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 April 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted filed on 18 April 2004 has been considered by the examiner.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character 220 has been used to designate both Ethernet and Memory. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims **3-5, 7** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim **3** recites the limitation "coarse power spectrum scan" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. Claim 1 does not mention a "coarse power spectrum scan." The "coarse power spectrum scan" is mentioned in claim 2. Claim 3 would have sufficient antecedent basis if it was dependent on claim 2 and has been evaluated as such.

6. Claim **4** recites the limitation "relatively finer bandwidth power spectrum scan" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim. Claim 1 does not mention a "power spectrum scan." Claims 2 and 3 mention a "coarse power spectrum scan." Claim 4 would have sufficient antecedent basis if it was dependent on either claim 2 or 3 and has been evaluated as such.

7. Claim **5** recites the limitation "relatively finer increment power spectrum scan" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim. Claim 1 does not mention a "power spectrum scan." Claims 2 and 3 mention a "coarse power spectrum scan." Claim 5 would have sufficient antecedent basis if it was dependent on either claim 2 or 3 and has been evaluated as such.

8. Claim **7** recites the limitation "spectrum analysis operation" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. The "spectrum analysis operation" is mentioned in claim 6. Claim 7 would have sufficient antecedent basis if it was dependent on claim 6 and has been evaluated as such.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims **1-6** and **8-10** are rejected under 35 U.S.C. 102(e) as being anticipated by Vogel et al. (U.S. 6,804,262).

11. Regarding claim **1**, Vogel teaches a method for locating a desired channel in a downstream signal comprising the steps of: scanning the downstream signal to generate a constructed channel response (See Fig. 7 and Col. 16 lines 10-29); processing the constructed channel response to generate a prospective channel list (See Fig. 7 Steps 308, 316, 320 and Col. 15 lines 49-55); and checking the prospective channel list to find the desired channel (See Col.15 lines 61-67 and Col. 16 lines 1-3).

12. Regarding claim **2**, Vogel teaches in addition the step of scanning the downstream signal with a coarse power spectrum scan to identify power containing regions of the downstream signal (See Fig. 7 Step 310 and Col. 15 lines 6-24), wherein the step of scanning the downstream signal scans the power containing regions (See Fig. 7 Steps 300, 302, 304, 306 and Col. 14 lines 16-37)

13. Regarding claim **3**, Vogel teaches wherein the coarse power spectrum scan has an increment that corresponds to a downstream physical layer bandwidth of about 6-8 MHz (See Col. 9 lines 44-48 and Col. 14 lines 32-38).

14. Regarding claim **4**, Vogel teaches wherein scanning the downstream signal comprises a relatively finer bandwidth power spectrum scan (See Col. 10 lines 35-41).

15. Regarding claim **5**, Vogel teaches wherein scanning the downstream signal comprises a relatively finer increment power spectrum scan (See Col. 10 lines 35-41 bandwidth is an incremental measurement of a spectrum).

16. Regarding claim **6**, Vogel teaches wherein scanning the downstream signal comprises performing at least one spectrum analysis operation (See Col. 14 lines 13-15).

17. Regarding claim **8**, Vogel teaches wherein the prospective channel list is checked with a QAM lock algorithm (See Col. 15 lines 61-65. Synchronizing the QAM signal timing would inherently involve checking a channel with a QAM lock algorithm).

18. Regarding claim **9,** Vogel teaches a method for locating a desired channel in a downstream signal comprising the steps of: identifying power containing regions of the downstream signal with a relatively coarse power spectrum scan wherein each step of the scan covers about a 6-8 MHZ portion of the downstream signal (See Fig. 7 Step 310 and Col. 15 lines 6-24 Col. 9 lines 44-48); performing a relatively finer power spectrum scan on the power containing regions of the downstream signal to generate a constructed channel response of the power containing regions (See Fig. 7 Steps 300, 302, 304, 306, Col. 10 lines 35-41 and Col. 14 lines 6-38); processing the constructed channel response of the power containing regions to generate a prospective channel list (See Fig. 7 Steps 308, 316, 320 and Col. 15 lines 49-55); and checking the prospective channel list with a QAM lock algorithm until the desired channel is identified (See Col. 15 lines 61-65 and Col. 16 lines 1-3. Synchronizing the QAM signal timing would inherently involve checking a channel with a QAM lock algorithm).

19. Regarding claim **10**, Vogel teaches a method for locating a desired channel in a downstream signal comprising the steps of: identifying power containing regions of the downstream signal with a relatively coarse power spectrum scan wherein each step of the scan covers about a 6-8 MHz portion of the downstream signal (See Fig. 7 Step 310 and Col. 15 lines 6-24 Col. 9 lines 44-48); performing a Fourier analysis on the power containing regions of the downstream signal to generate a constructed channel response of the power containing regions (See Col. 14 lines 5-37. Measuring power at specific frequencies is a Fourier analysis.); processing the constructed channel response of the power containing regions to generate a prospective channel list (See Fig. 7 Steps 308, 316, 320 and Col. 15 lines 49-55); and checking the prospective channel list with a QAM lock algorithm until the desired channel is identified (See Col. 15 lines 61-65 and Col. 16 lines 1-3 Synchronizing the QAM signal timing would involve checking a channel with a QAM lock algorithm).

Claim Rejections - 35 USC § 103

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

21. Claim **7** is rejected under 35 U.S.C. 103(a) as being unpatentable over Vogel in view of Dowling.

22. Regarding claim **7**, Vogel teaches a spectrum analysis method that is characterized by power measurements taken at frequencies located within a channel

using a narrow band pass filter (See Col. 14 lines 13-15). Vogel teaches where this method is used to map out a signal's spectral profile (See Col. 16 lines 36-38). Vogel fails to disclose taking the fast Fourier transform of the signal. However, it is well known in the art to take a fast Fourier transform of a received signal to generate a signals spectral profile as disclosed in Dowling (See Paragraph 47). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Vogel's cable modem so that it performed a fast Fourier Transform on the incoming signal as taught by Dowling. The motivation for having Vogel's cable modem perform a fast Fourier transform would have been that a fast Fourier transform calculates the spectral profile of a signal more quickly than individual measurements.

Conclusion

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jamieson W. Fish whose telephone number is 703-305-0884. The examiner can normally be reached on 8-5.

24. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ngoc Vu can be reached on 703-305-4946. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

25. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JF 11/29/2004

NGOC-YEN VU
PRIMARY EXAMINER